

State of California  
California Energy Commission  
Minutes of the May 13, 2015, Energy Commission Business Meeting

The meeting was called to order by Chair Robert B. Weisenmiller. The Pledge of Allegiance was led by Chair Weisenmiller.

Present:

Robert B. Weisenmiller, Chair

Karen Douglas, Commissioner

J. Andrew McAllister, Commissioner

David Hochschild, Commissioner

Janea A. Scott, Commissioner

1. CONSENT CALENDAR. (Items on the Consent Calendar will be taken up and voted on as a group. A commissioner may request that an item be moved and discussed later in the meeting.)
  - a. City of Roseville. Possible adoption of an order finding that the City of Roseville's contract with Powerex Corporation for a covered procurement of renewable energy be found compliant with the Emission Performance Standard for Local Publicly Owned Electric Utilities pursuant to SB 1368 (California Code of Regulations, Title 20, Sections 2900-2913). Docket Number 15-EPS-1. Contact: Michael Nyberg.
  - b. City of Roseville. Possible adoption of an order finding that the City of Roseville's four contracts with Blackwell Solar LLC, Iberdrola Renewables LLC, Lost Hills Solar LLC, and Silicon Valley Power for covered procurements of renewable energy be found compliant with the Emission Performance Standard for Local Publicly Owned Electric Utilities pursuant to SB 1368 (California Code of Regulations, Title 20, Sections 2900-2913). Docket Number 15-EPS-1. Contact: Michael Nyberg.
  - c. Southern California Public Power Authority. Possible adoption of an order finding that the Southern California Public Power Authority's contract with ORNI 37 LLC for a covered procurement of renewable energy be found compliant with the Emission Performance Standard for Local Publicly Owned Electric Utilities pursuant to SB 1368 (California Code of Regulations, Title 20, Sections 2900-2913). Docket Number 15-EPS-1. Contact: Michael Nyberg.

*Commissioner McAllister moved and Commissioner Douglas seconded approval of the Consent Calendar. The vote was unanimous. (5-0)*

2. ENERGY COMMISSION COMMITTEE APPOINTMENTS. Possible approval of appointments to the Energy Commission's Standing Committees and Siting Case Committees. Contact: Kevin Barker. (Staff presentation: 5 minutes)

*This item was held. (No action was taken.)*

3. ALTERNATIVE WATER SUPPLY FOR POWER PLANT OPERATION. Consideration and possible approval of an order that delegates authority to the Executive Director to approve amendments to power plant Final Decisions for the purpose of securing alternative water supply necessary for continued power plant operation. This action is authorized by the Governor's Executive Order B-29-15, issued April 1, 2015. Contact: Jeffery Ogata. (Staff presentation: 5 minutes)

*Commissioner Douglas moved and Commissioner Scott seconded approval of the order. The vote was unanimous. (5-0)*

4. ARGUS COGENERATION EXPANSION (86-AFC-1C). Possible approval of an order granting the Petition to Decommission the Argus Cogeneration Expansion Project (ACE). Staff has reviewed the petition and recommends approval with the adoption of certain new and revised conditions of certification that will assure compliance with laws, ordinances, regulations and standards and reduce potential environmental impacts to a less than significant level. Contact: Dale Rundquist. (Staff presentation: 5 minutes)

*Item 4 was removed from the agenda.*

5. 2013 PUBLIC DOMAIN CALIFORNIA BUILDING ENERGY CODE COMPLIANCE SOFTWARE-RESIDENTIAL, CBECC-RES, VERSION 4. (12-BSTD-01). Proposed resolution approving the 2013 Public Domain California Building Energy Code Compliance Residential software, CBECC-RES, Version 4, which may be used to demonstrate performance compliance with the residential provisions of the 2013 Building Energy Efficiency Standards (also known as the Energy Code). Among other changes, Version 4 includes the ability to model a boiler for hydronic space heating and more accurate representation of addition/alteration conditions. The resolution also decertifies all previously approved versions of CBECC-Res and alternative calculation methods (compliance software) based on previous versions of CBECC-Res, as of August 1, 2015. (Public Resources Code, section 25402.1(a), (b).) Contact: Larry Froess. (Staff presentation: 5 minutes)

*Commissioner McAllister moved and Commissioner Douglas seconded approval of Item 5. The vote was unanimous. (5-0)*

6. APPLIANCE EFFICIENCY ENFORCEMENT RULEMAKING – HEARING AND POSSIBLE ADOPTION OF REGULATIONS. (12-AAER-1). Hearing and consideration of proposed resolution adopting regulations establishing an administrative enforcement process for the Appliance Efficiency Regulations set forth in Title 20, section 1601 et seq. of the California Code of Regulations. This matter comes after the end of the 15-day comment period for the regulations required by the Administrative Procedure Act. Contact: John Nuffer. (Staff presentation: 5 minutes)

*Commissioner McAllister moved and Commissioner Douglas seconded approval of Item 6. The vote was unanimous. (5-0)*

7. ENERGY EFFICIENCY STANDARDS FOR HEATING VENTILATION AND AIR CONDITIONING (HVAC) AIR FILTERS, DIMMING FLUORESCENT BALLASTS, HEAT PUMP WATER CHILLING PACKAGES, AND FEDERAL UPDATES – HEARING AND POSSIBLE ADOPTION OF REGULATIONS (15-AAER-1). Contact: Ken Rider. (Staff presentation: 10 minutes)

Hearing and consideration of proposed resolution adopting the following:

- a. NEGATIVE DECLARATION. Proposed resolution adopting the Negative Declaration, including a finding of No Significant Impact under the California Environmental Quality Act (CEQA), for the proposed energy efficiency standards for heating ventilation and air conditioning (HVAC) air filters, dimming fluorescent ballasts, heat pump water chilling packages, and federal updates. This adoption hearing comes after the end of the 30-day comment period necessary to comply with CEQA guidelines.

- b. AMENDMENTS TO THE APPLIANCE EFFICIENCY REGULATIONS. Proposed resolution adopting amendments to the Appliance Efficiency Regulations in Title 20 of the California Code of Regulations relating to energy efficiency standards for HVAC air filters, dimming fluorescent ballasts, heat pump water chilling packages, and federal updates. The proposed standards would reduce electricity and natural gas consumption by improving the efficiency of dimming ballasts and selecting appropriate air filters. This adoption hearing comes after a 60-day and separate 15-day comment period.

*Commissioner McAllister moved and Commissioner Hochschild seconded approval of Item 7. The vote was unanimous. (5-0)*

- 8. TRINITY TECHNOLOGY GROUP. Proposed resolution approving Agreement 14-409.00-007 for a \$1,998,950 IT MSA contract with Trinity Technology Group for development of a new database system for the continued implementation of the Renewables Portfolio Standard Program. The new database will provide increased functionality and will improve the efficiency of RPS business processes, as well as allow for expanded data collection and storage to meet current and future state policy requirements. (PVEA funding) Contact: Jennifer Campagna. (Staff presentation: 5 minutes)

*Commissioner Hochschild moved and Commissioner McAllister seconded approval of Item 8. The vote was unanimous. (5-0)*

- 9. MENDOCINO LAND TRUST, INC. Proposed resolution approving Agreement ARV-14-048 with Mendocino Land Trust, Inc. for a \$498,040 grant to deploy 24 level 1 chargers, 22 level 2 chargers, and two DC fast chargers at 12 locations in Mendocino County, California. (ARFVTP funding) Contact: Jacob Orenberg. (Staff Presentation: 5 minutes)

*Commissioner Scott moved and Commissioner Hochschild seconded approval of Item 9. The vote was unanimous. (5-0)*

- 10. ZERO MOTORCYCLES, INC. Proposed resolution approving Agreement ARV-14-049 with Zero Motorcycles, Inc. for a \$1,009,220 grant to expand full electric motorcycles production capacity through scale redesign and manufacturing line improvements. These improvements include an expansion of Zero's manufacturing capability as well as an increase in the production efficiency via strategic redesign of its manufacturing and engineering processes. (ARFVTP funding) Contact: Darren Nguyen. (Staff Presentation: 5 minutes)

*Commissioner Scott moved and Commissioner McAllister seconded approval of Item 10. The vote was unanimous. (5-0)*

- 11. MEDIUM- AND HEAVY-DUTY ADVANCED VEHICLE TECHNOLOGY DEMONSTRATION, PON-14-605. Through this grant solicitation, the Energy Commission sought proposals for the demonstration of advanced vehicle technologies utilizing alternative fuels that will enhance market acceptance and lead to vehicle production and commercialization. Scoring preferences were provided to projects located in disadvantaged communities. (ARFVTP funding) Contact: Larry Rillera. (Staff presentation: 5 minutes)
  - a. MOTIV POWER SYSTEMS, INC. Proposed resolution approving Agreement ARV-14-050 with Motiv Power Systems, Inc. for a \$2,980,875 grant to demonstrate an electric refuse and loader truck within disadvantaged communities in the Sacramento region.
  - b. TRANSPORTATION POWER, INC. Proposed resolution approving Agreement ARV-14-051 with Transportation Power, Inc. for a \$2,884,812 grant to demonstrate a

heavy-duty electric refuse truck. The two year demonstration project will occur in disadvantaged communities in the Sacramento region under rigorous duty cycles commensurate with refuse and waste collection activities.

- c. NORTH AMERICAN REPOWER, LLC. Proposed resolution approving Agreement ARV-14-052 with North American Repower, LLC for a \$3,000,000 grant to demonstrate a plug-in hybrid electric-renewable natural gas truck. The 36 month total field demonstration period of six armored security vehicles will occur in disadvantaged communities in the South Coast Air Quality Management District.
- d. TRANSPORTATION POWER, INC. Proposed resolution approving Agreement ARV-14-053 with Transportation Power, Inc. for a \$3,000,000 grant to demonstrate a Class 8 advanced battery-electric truck in disadvantaged communities at the Port of San Diego.
- e. TRANSPORTATION POWER, INC. Proposed resolution approving Agreement ARV-14-054 with Transportation Power, Inc. for a \$3,000,000 grant to demonstrate a heavy-duty electric yard tractor within various disadvantaged communities in California's central valley.

*Commissioner Scott moved and Commissioner Douglas seconded approval of Item 11. The vote was unanimous. (5-0)*

12. ZERO EMISSION VEHICLE (ZEV) READINESS, PON-14-607. This grant solicitation sought proposals to support new and existing planning efforts for plug-in electric vehicles (PEVs) and fuel cell electric vehicles (FCEVs). (ARFVTP funding) Contact: Sharon Purewal. (Staff Presentation: 10 minutes)
- a. REDWOOD COAST ENERGY AUTHORITY. Proposed resolution approving Agreement ARV-14-055 with Redwood Coast Energy Authority for a \$169,000 grant to create a detailed regional hydrogen refueling infrastructure plan for the nine county North Coast and Upstate Regions. Resources will be created to promote early adoption of fuel cell electric vehicles, encourage incorporation of FCEVs in municipal fleets and create a micro-siting analysis for hydrogen stations in the nine county regions.
  - b. TAHOE REGIONAL PLANNING AGENCY. Proposed resolution approving Agreement ARV-14-056 with the Tahoe Regional Planning Agency for a \$200,000 grant to develop a Tahoe-Truckee Regional PEV Readiness Plan through coordinated engagement with PEV partners and stakeholders. The plan will establish the existing conditions and identify the key needs in the Tahoe-Truckee region to prepare for and coordinate PEV infrastructure deployment.
  - c. CITY OF PALO ALTO. Proposed resolution approving Agreement ARV-14-057 with the City of Palo Alto for a \$53,000 grant to promote the adoption of electric vehicles through education and outreach to over 50 commercial and multi-family property owners and two or more green car show events regarding electric vehicle charging station siting issues and opportunities.
  - d. CITY OF MT. SHASTA. Proposed resolution approving Agreement ARV-14-058 with the City of Mt. Shasta for a \$300,000 grant to produce a comprehensive PEV readiness plan to support the deployment of electric vehicles in Glenn and Colusa counties. The project will include plans for PEV infrastructure deployment, streamlined permitting, and installation and inspection processes. The project will

also implement core elements of the Upstate Region PEV Readiness Plan to facilitate rapid PEV adoption throughout the entire Upstate region.

- e. SOLANO TRANSPORTATION AUTHORITY. Proposed resolution approving Agreement ARV-14-059 with the Solano Transportation Authority for a \$300,000 grant to implement aspects of the Bay Area's PEV Readiness Plan in Solano County that will help reduce barriers to ensure mid- and long-term success of PEV adoption.

*Commissioner Scott moved and Commissioner Douglas seconded approval of Item 12. The vote was unanimous. (5-0)*

- 13. CO2NEXUS, INC. Proposed resolution approving Agreement 500-14-004 with CO2Nexus, Inc. for a \$900,300 contract to demonstrate an alternative laundry system using liquid carbon dioxide. This unique system will be demonstrated at the Naval Base Ventura County at Port Hueneme and will reduce natural gas, electricity and water used for cleaning military combat garments, general purpose fabrics and textiles, fire retardant items, military protective clothing and field equipment that requires special handling. In many cases these textiles cannot currently be laundered without losing their protective capabilities. CO2Nexus will evaluate the performance, energy savings, cleaning, and operational costs. (PIER natural gas funding) Contact: Paul Robinson. (Staff presentation: 5 minutes)

*Commissioner Douglas moved and Commissioner Scott seconded approval of Item 13. The vote was unanimous. (5-0)*

- 14. GLINT PHOTONICS, INC. Proposed resolution approving Agreement EPC-14-040 with Glint Photonics, Inc. for a \$999,940 grant to develop Self-Tracking Concentrator Photovoltaic (ST-CPV) modules. ST-CPV is a new solar panel technology that applies light-reactive optical materials on the panel to collect direct sunlight and internally concentrate sunlight onto small areas of high-efficiency photovoltaic (PV) cells. This technology is anticipated to improve energy efficiency and reduce the cost of concentrator PV systems. (EPIC funding) Contact: Prab Sethi. (Staff Presentation: 5 minutes)

*Commissioner Hochschild moved and Commissioner Douglas seconded approval of Item 14. The vote was unanimous. (5-0)*

- 15. TRUSTEES OF THE CALIFORNIA STATE UNIVERSITY. Proposed resolution approving the six highest ranking grant applications from the Public Interest Energy Research (PIER) program's Energy Innovations Small Grant Solicitation 14-04 for Natural Gas and Transportation Natural Gas. These grants were competitively selected and are capped at \$150,000 each. (PIER natural gas funding) Contact: James Lee. (Staff presentation: 10 minutes)
  - a. Natural Gas (14-04G)
    - i) San Diego State University, San Diego, *Development of Next-Generation Feedstock for Biomethane Production*, Garoma, Temesgen, \$150,000. The goal of this project is to demonstrate the feasibility of using next-generation biomass waste fuel sources, namely lipid extracted algae and protein extracted algae, as feedstock for biomethane production. The project has a potential to develop new renewable energy sources, helping the state achieve its AB 32 and RPS goals.
    - ii) California Polytechnic State University, San Luis Obispo, *NOx Control with Hydrogen-Rich Biogas from Two-Phase Digestion*, Dr. Lundquist, Tryg, \$145,652. The goal of this project is to determine the feasibility of using a low-cost, two-phase anaerobic digestion system with biogas sparging to produce biogas with low NOx

emissions potential. The project will demonstrate an innovative method of two-phase anaerobic digestion to produce mixtures of methane and hydrogen in ratios that have been proven to reduce NOx emissions from internal combustion engines. This is critical as existing air pollution control devices are too expensive for small-scale producers of biogas.

- iii) NegaWatt Consulting, Inc., San Diego, CA, *A Gas-Saving Control, Diagnostic and Visualization System for Commercial HVAC Applications*, Esser, Marc, \$150,000. The goal of this project is to establish the feasibility of an advanced control, diagnostic and visualization system for commercial HVAC applications that reduces natural gas consumption by at least 10%. The project will develop and test a low-cost hardware and software system with innovative algorithms that achieve natural gas savings for commercial buildings. The hardware side will consist of centrally controlled sensor and relay circuitry that interfaces with HVAC systems and that provides for system operation without the use of traditional thermostats. The software side will consist of numerical analysis and control, and will be supplemented by user-friendly visualization.
- iv) Taylor Energy, El Dorado Hills, CA, *Syngas Process Development for Renewable-Methane Production*, Taylor, Donald G., \$150,000. The goal of this project is to determine the feasibility of an improved thermal-catalytic process using Refuse Derived Biomass (RDB) as the feedstock for conversion into renewable-methane. The project will test a mild steam-hydrogasification process using homogeneous feed recovered from municipal solid waste by shredding and air-stripping to remove stones, glass, and grit. The RDB feed will be converted into methane-rich fuel gases.
- v) Hi-Z Technology, Inc., San Diego, CA, *Self-Powered Thermoelectric Desalination System*, Leavitt, Fred, \$150,000. The goal of this project is to determine the feasibility of a thermoelectric generator (TEG) designed to improve the overall cost effectiveness and efficiency of natural gas powered distillation for water desalination. Hi-Z will design and fabricate a bench scale demo unit that will use temperature, flow rate, and power measurement to prove the feasibility of using a TEG as part of a thermoelectric desalination system, with the goal of decreasing the natural gas used by the system.
- b. Transportation Natural Gas (14-04TNG). North American Repower.com, Oceanside, CA, *Advanced Pre-chamber Ignition for High EGR Dilute Burn Engine*, Petersen, Peter, \$149,991. The goal of this project is to demonstrate the ability of a new and unique pre-chamber design to increase combustion stability at lean or ultra-lean conditions while operating on natural gas. The design will be engine and vehicle tested on a Detroit Diesel 60 Series engine. The pre-chamber technology may be used in almost any older diesel engine to virtually eliminate particulate matter and reduce NOx emissions from vehicles running on natural gas.

*Commissioner Hochschild moved and Commissioner McAllister seconded approval of Item 15. The vote was unanimous. (5-0)*

- 16. LAWRENCE BERKELEY NATIONAL LABORATORY. Proposed resolution approving Agreement EPC-14-066 with the Department of Energy's Lawrence Berkeley National Laboratory for a \$3,000,000 grant to develop novel building window and facade technologies that can be integrated into a cost-effective system that can reduce HVAC and lighting energy use while improving occupant comfort. Technology development activities include highly insulating windows, energy recovery-based envelope ventilation systems, and dynamic

daylight redirecting systems. (EPIC funding) Contact: Dustin Davis. (Staff Presentation: 5 minutes)

*Commissioner McAllister moved and Commissioner Douglas seconded approval of Item 16. The vote was unanimous. (5-0)*

17. BRINGING ENERGY EFFICIENCY SOLUTIONS TO CALIFORNIA'S INDUSTRIAL, AGRICULTURAL AND WATER SECTORS, PON-14-304. This grant solicitation sought to fund technology deployment projects that accelerate the commercialization of electricity-related, energy efficient industrial, agricultural, and water/wastewater processes at multiple sites. (EPIC funding) Contact: Leah Mohney. (Staff Presentation: 10 minutes)
  - a. UNIVERSITY OF CALIFORNIA, RIVERSIDE. Proposed resolution approving Agreement EPC-14-062 with the Regents of the University of California, on behalf of the Riverside Campus, for a \$3,017,034 grant to deploy energy management and other control strategies to improve energy efficiency and reduce costs in the delivery and treatment of wastewater in California.
  - b. PORIFERA, INC. Proposed resolution approving Agreement EPC-14-063 Porifera Inc., for a \$3,230,420 grant to deploy advanced wastewater treatment with Porifera's Forward Osmosis Recycler. This process concentrates the hard-to-treat industrial wastewater and produces high quality water for reuse. The demonstration will determine the energy savings, emission reductions and maintenance savings associated with the technology.
  - c. PORIFERA, INC. Proposed resolution approving Agreement EPC-14-065 with Porifera, Inc. for a \$2,499,289 grant to deploy Porifera's Forward Osmosis (PFO) Concentrator in the food and beverage industry. The PFO Concentrator uses unique membrane technology to make high quality juice concentrates, and purifies wastewater for on-site reuse. The demonstration will quantify the energy savings and increase water reuse at selected sites.
  - d. WEXUS TECHNOLOGIES, INC. Proposed resolution approving Agreement EPC-14-070 with Wexus Technologies, Inc. for a \$4,000,000 grant to deploy Wexus (Water-Energy Nexus) mobile, cloud-based software for commercialization in California's agricultural industry. The software will allow farmers to access their on-farm energy, water and cost information from any mobile device and to quickly respond to changes in energy usage, adjust and optimize equipment in the field and reduce operational expense due to energy costs.
  - e. UNIVERSITY OF CALIFORNIA, BERKELEY. Proposed resolution approving Agreement EPC-14-075 with the Regents of the University of California, on behalf of the Berkeley Campus for a \$4,981,729 grant to deploy a pre-commercial, software-based, energy management system that will reduce electricity used in compressed air systems. The software will be deployed in multiple industries.
  - f. KENNEDY/JENKS CONSULTANTS, INC. Proposed resolution approving Agreement EPC-14-076 with Kennedy/Jenks Consultants, Inc. for a \$3,476,085 grant to deploy the use of cloth depth filtration for raw wastewater filtration to increase the organic removal efficiency and reduce secondary treatment electrical energy demand.

*With respect to Item 17d, Commissioner Douglas disclosed for the record that she is an adjunct professor at UC Davis King Hall and that UC Davis a subcontractor for the agreement. King Hall is not involved in the agreement. Commissioner McAllister made the same disclosure with regard to his wife's employment at King Hall.*

*Commissioner McAllister moved and Commissioner Douglas seconded approval of Item 17. The vote was unanimous. (5-0)*

18. REDUCE THE ENVIRONMENTAL AND PUBLIC HEALTH IMPACTS OF ELECTRICITY GENERATION AND MAKE THE ELECTRICITY SYSTEM LESS VULNERABLE TO CLIMATE IMPACTS: PHASE I, PON-14-309. This grant solicitation sought to fund applied research and development projects that reduce the environmental impacts of electricity generation and make the electricity system less vulnerable to climate impacts through projects on habitat and species protection, water resources associated with the existing electricity generation systems, including fossil fuel and renewable energy sources, and environmental issues associated with emerging renewable energy technologies, the interaction of climate change with the electricity system, and the electricity system's future evolution. (EPIC funding) Contact: Lillian Mirviss. (Staff presentation: 10 minutes)
- a. UNIVERSITY OF CALIFORNIA, RIVERSIDE. Proposed resolution approving Agreement EPC-14-064 with the Regents of the University of California, on behalf of the Riverside campus, for a \$399,818 grant to investigate the impacts of aerosols on hydrology and hydropower generation in California using the Big Creek Project as a case study.
  - b. UNIVERSITY OF CALIFORNIA, BERKELEY. Proposed resolution approving Agreement EPC-14-067 with the Regents of the University of California, on behalf of the Berkeley Campus, for a \$1,100,000 grant to conduct research to improve snowpack forecasting in the Sierra Nevada that can be used to facilitate reliable hydropower generation.
  - c. MAULBETSCH CONSULTING. Proposed resolution approving Agreement EPC-14-068 with Maulbetsch Consulting for a \$581,580 grant to fund an analysis of the design, performance and cost of optimized hybrid cooling systems at utility power plant scale to illustrate the potential benefits of hybrid cooling in California.
  - d. ENERGY AND ENVIRONMENTAL ECONOMICS, INC. Proposed resolution approving Agreement EPC-14-069 with Energy and Environmental Economics, Inc. for a \$700,000 grant to advance the understanding of key parameters of long-term energy scenarios and greenhouse gas abatement options in the California energy system. The research will advance the state of the art of modeling capabilities for the electricity sector.
  - e. FRONTIER WIND. Proposed resolution approving Agreement EPC-14-071 with Frontier Wind for an \$862,875 grant to design, lab test, and field test an innovative bat deterrence system to be installed directly on the blades of wind turbines. This technology could lead to greater wind power capacity in existing and new wind power resource areas.
  - f. LAWRENCE BERKELEY NATIONAL LABORATORY. Proposed resolution approving Agreement EPC-14-072 with the Department of Energy's Lawrence Berkeley National Laboratory for a \$700,000 grant to provide detailed modeling of long-term energy scenarios considering climate change impacts, electricity system resilience analysis, and health and environmental co-benefits.
  - g. LAWRENCE BERKELEY NATIONAL LABORATORY. Proposed resolution approving Agreement EPC-14-073 with the Department of Energy's Lawrence Berkeley National Laboratory for a \$500,000 grant to develop an empirical, real-world, detailed, and fine-resolution observational characterization of urban heat

islands that can be used to assess the potential energy benefits and performance of future urban heat island mitigation programs.

- h. UNIVERSITY OF CALIFORNIA, IRVINE. Proposed resolution approving Agreement EPC-14-074 with the Regents of the University of California, on behalf of the Irvine Campus for a \$698,792 grant to characterize climate change impacts on different components of the electricity system to understand the effect of climate change on the system's ability to meet long-term greenhouse gas emission reduction goals.

*Commissioner Hochschild moved and Commissioner Douglas seconded approval of Item 18. The vote was unanimous. (5-0)*

- 19. NATURAL GAS PIPELINE SAFETY AND DAMAGE PREVENTION GRANTS, PON-14-503. This grant solicitation sought proposals that demonstrate natural gas pipeline right-of-way monitoring technologies that are past the “proof-of-concept” stage in a utility setting, and to develop programs that promote knowledge regarding pipeline safety for both the public and non-industry workers. (PIER natural gas funding) Contact: Avtar Bining. (Staff Presentation: 5 minutes)

- a. GAS TECHNOLOGY INSTITUTE. Proposed resolution approving Agreement PIR-14-014 with Institute of Gas Technology dba Gas Technology Institute for a \$1,049,978 grant to demonstrate a "Pipeline Right of Way Monitoring and Notification System" that can provide leading indicators of threats to buried natural gas pipelines using both mobile sensors mounted on excavation devices and stationary sensors mounted directly on the pipe at a site to be provided by a California natural gas utility.
- b. ACELLENT TECHNOLOGIES, INC. Proposed resolution approving Agreement PIR-14-015 with Acellent Technologies, Inc. for a \$1,633,093 grant to deploy and field test a "Rapid+ System for Natural Gas Pipeline Integrity Management" that can detect encroachments and damage to buried natural gas pipelines using a combined active/passive damage impact detection system, the Real-time Active Pipeline Integrity Detection (RAPID+) system, with stationary sensors mounted directly on the pipe, at a site to be provided by a California natural gas utility.

*Commissioner McAllister moved and Commissioner Hochschild seconded approval of Item 19. The vote was unanimous. (5-0)*

- 20. GAS TECHNOLOGY INSTITUTE. Proposed resolution approving Agreement PIR-14-017 with Institute of Gas Technology, dba Gas Technology Institute, for a \$950,000 grant to develop and demonstrate an advanced, cost effective, low NOx ribbon burner system that can be retrofitted to traditional combustion systems without sacrificing energy efficiency or process control. The demonstration site is a commercial bakery in Southern California. (PIER natural gas funding) Contact: Rajesh Kapoor. (Staff presentation: 5 minutes)

*Commissioner Scott moved and Commissioner McAllister seconded approval of Item 20. The vote was unanimous. (5-0)*

- 21. **Minutes:** Possible approval of the April 8, 2015, Business Meeting Minutes.

*Commissioner McAllister moved and Commissioner Scott seconded approval of the Minutes. The vote was unanimous. (5-0)*

- 22. **Lead Commissioner or Presiding Member Reports.** The commissioners reported on their recent activities and site visits.

23. **Chief Counsel's Report:** None.
24. **Executive Director's Report.** Executive Director Rob Oglesby gave the report.
25. **Public Adviser's Report.** None.
26. **Public Comment:** Mr. Adé Jackson, Phi Beta Sigma Fraternity, Inc., Intern, Public Adviser's Office

Appearances:

\*By telephone

\* Jerome Carman, Redwood Coast Energy Authority

\*Gary Gockel, Full Solutions Group

Gary Fernstrom, California Investor Owned Utilities

Jay Friedland, Zero Motorcycles

\*Paul Haberlein, E Pattern Energy

Jeffery Harris, Ellison Schneider & Harris LLP

\*Doug Kern, Mendocino Land Trust

Charles Kim, California Investor Owned Utilities, Southern California Edison

\*Paul Lin, Regal Beloit

Kevin Messner, PoliticaLogic

\*Laura Petrillo-Groh, AHRI

\*Aniruddh Roy, Goodman

\*Stephen Selkowitz, Lawrence Berkeley National Laboratory

Mike Simon, TransPower

\*Chris Terrell, Wexus

Ed Valeau, Wexus

Peter Ward, Alternative Fuels Advocates

Chuck White, Waste Management

There being no further business, the meeting was adjourned.

Respectfully submitted,

HARRIET KALLEMEYN  
Secretariat